Meeting Summary
Environmental Technology Verification Pilot - Wet Weather Flow Technologies
Stakeholder Advisory Group

July 13, 2000
Ann Arbor, MI

(See Attendance Record for Participants)

Opening Remarks

NSF International and the U.S. Environmental Protection Agency hosted the third meeting of the Stakeholder Advisory Group (SAG) for the Wet Weather Flow Technologies (WWF) Pilot at NSF International Headquarters in Ann Arbor, MI. There were 46 attendees, 10 of the 24 SAG members, 11 from the USEPA and NSF International contingency, and 25 observers representing the various stakeholder groups in the WWF pilot. Tom Bruuresma, General Manager, Engineering Research Services, at NSF, welcomed all participants and self introductions were made. John Schenk (NSF) read the NSF Antitrust Policy, reviewed the agenda, and outlined the meeting goals:

- Review of the ETV Program
- Review of procedures for protocol development
- Present schedule for verification testing
- Provide status report for priority technology groups
- Discuss future directions of the program

Kevin Smith provided an update on SAG membership. Four new members have been added or replaced other members since the March 1999 SAG meeting. These are: Tom Adams (Vortechnics, Inc.); Karl Scheible (HydorQual, Inc); John Stufflebean, (Kansas City Department of Environmental Management); and Steve Tarallo (Infilco Degremont, Inc. – replacing Merv Bowen).

ETV Program Update

Penny Hansen (USEPA, Director of ETV Program), presented a status report on the ETV program. She noted that 49 Protocols, 55 Test Plans, and 77 Verifications have been completed among the 12 ETV Pilots and that 104 technologies are in the verification process. There are presently 18 Stakeholder Advisory Groups (SAGs) participating in the ETV program.

WWF Pilot Report

Mary Stinson (USEPA) and John Schenk (NSF) then provided an overview of the Wet Weather Flow (WWF) Pilot including Goals, Pilot Schedule, Review and Approval

Procedures for Protocols, Test Plans, and Verification Reports, and finally the Selection Process for Field Testing Organizations (Attachment 2).

Mary Stinson (USEPA) stated that the main goal of the WWF Pilot is the development of a sustainable verification program with the attainment of 20 to 50 verifications. Comprehensive and affordable test protocols are being finalized under the direction of the USEPA and NSF International. The participation of vendors with viable technologies is the key measure of success of the program.

John Schenk pointed out that eventually the USEPA's role will be to merely provide the infrastructure for the ETV program. The testing will be the responsibility of the vendor. John Schenk (NSF) also stated that the SAG members will be given the opportunity to review and comment on all Verification Protocols, after each has been approved by the relevant Technology Panel.

Mary Stinson (USEPA) gave an overview of the pilot schedule. Seven protocols are slated for completion between July and September. Testing will be initiated in August of 2000, and verifications completed in January/February 2001.

Mary Stinson (USEPA) then explained the pilot structure, which consists of the USEPA/NSF International cooperative agreement partnership, a 24 member SAG, and five Technology Panels, each consisting of a chair and 5-11 members.

Mary Stinson (USEPA) listed the documents being produced under the WWF Pilot: a Quality Management Plan (QMP), Protocols, Test Plans, Verification Reports, and Verification Statements.

John Schenk presented the document review process :

- Review of initial drafts by the USEPA and NSF International,
- Review and approval by Technology Panels and/or peer review
- Review by the SAG and interested vendors
- Posting on the Internet after the comment period and any necessary modifications.

Exception: the QMP is approved by EPA only.

Bob Riemers from Tulane University brought up his involvement in the Water Environment Research Foundation (WERF), stating that there were five technologies being worked on , and raising the possibility that this might be a fit for a collaborative effort with the ETV program. Penny Hansen (USEPA) pointed out that in order to be compatible with ETV objectives, these projects need to be applied vs. research oriented, and also need to be focused on the evaluation of commercially available technologies from vendors. WERF is a research project that does not include the testing of commercial units from vendors, so cannot be considered for any ETV program involvement.

Joe O'Brien (AquaShield) cautioned that if vendors are allowed to select the FTO (Field Testing Organization), care must be taken to ensure that they are qualified. John Schenk (NSF) stated that the NSF, with the assistance of the Technology Panel, will screen prospective FTOs to ensure they are qualified. Qualifying factors presented include:

1. having a level of experience with the subject technology,
2. being located at a selected testing facility and recommended by a facility owner, or
3. being recommended by a vendor.

Nate Baldwin (CSR Stormceptor) indicated that he wanted to be sure the vendor was not eliminated from the process once the FTO was selected. John Schenk (NSF) stated that vendor input will be very important in the development of the site-specific Test Plans. Vendors will be involved throughout the verification process, including providing technical support during testing and review of the Draft Verification Report.

Source Water Protection ETV Pilot Report

Tom Stevens (NSF) provided the SAG with an update on the Source Water Protection (SWP) Pilot. The SWP Pilot has a very broad potential scope of technologies. The technologies presently focused upon fall under the general categories of decentralized wastewater treatment, urban infrastructure rehabilitation, and watershed protection (Attachment 3).

Karl Scheible (HydroQual, Inc.) then gave a presentation on the development of a Verification Protocol for Testing In-Drain Treatment Devices, a technology housed under the "Watershed Protection Technologies" category (Attachment 3A). A joint effort between this SWP Pilot technology area and the Stormwater Source Area Treatment Technologies for the WWF Pilot may be undertaken as a means of reducing costs and benefiting all stakeholders. Testing done for verification under the SWP Pilot Area of In-Drain Treatment Devices could also be applied to the verification process under the WWF Pilot Area of Stormwater Source Area Treatment Technologies.

Technology Panel Reports

1. **Wet Weather Models.** Progress on the development of a Verification Protocol was presented by Panel chair Charles Rowney (CDM, Inc). and Sri Rangarajan, (Limno-Tech, Inc) (Attachment 4). The original protocol was divided into two, one covering "Hydrologic/Runoff Models" and the other "Hydrodynamic/Collection System Models." The Protocol for Hydrologic Models is nearly complete and should be ready for review by vendors and other interested parties within a month. The separate protocol for Hydrodynamic Models is currently under development.
2. **Stormwater Treatment Technologies.** An update was presented by Kevin Smith, NSF International (Attachment 5). The scope of this project covers manufactured structural BMPs of proprietary design installed upstream of or at an

entrance to a storm water collection system or surface water discharge. The Draft protocol is presently under review by the Technology Panel, approval expected in early August. Over twenty vendors have been identified, with thirteen seriously considering participation. Zeta Co. has already submitted their application, and a test plan for a pressurized filtration device from this company is now being finalized. Testing for this technology area is being planned in Green Bay, WI.; other test sites being considered include Milwaukee, WI., East Lansing, MI., and Syracuse, N.Y.

The following discussion questions were raised:

Barry Johnson (CDM, Inc), who is working on the Rouge River Basin project, said that two issues should be addressed in the Verification Protocol for Stormwater Treatment Technologies:

- Can the device withstand freezing temperature conditions? Freezing of the device actually happened in his experience with the Rouge River project.
- Does the device aid in removal of bacteria? This would be a benefit that should be quantified.

Steve Hides (H.I.L. Technologies) brought up the point that it may be difficult to achieve fifteen storm events. John Schenk pointed out that use of synthetic storm runoff as an alternative was anathema to the Technology Panel.

Dave Woelkers (HydroCompliance Mangement, Inc.) asked if data could be made available in preliminary stages, before all 15 events are complete and before a Final Verification Report is issued so that the information could get to customers quickly. John Schenk from NSF replied that the data would not be made available until the Verification Report is final but that the WWF Pilot will publish status reports that show what units are being verified and at what stage they are in the verification process.

1. **High Rate Disinfection.** Kevin Smith reported on the verification of induction mixers (Attachment 6). The Mixer Protocol is currently under review by the WWF SAG (comments due by July 28). Karl Scheible (HydroQual, Inc.) presented a detailed overview of the Draft Verification Protocol for UV Systems used for Disinfection of Wet Weather Flows. . Two Vendors have signed up for verification. Testing will be conducted by Alden Research Laboratory in August/September 2000 at a USGS facility in Turners Falls, MA. The final draft of this protocol has undergone review by the Tech Panel, peer reviewers and EPA QA personnel.
2. **Flow Monitoring Equipment** presented by George Kurz from ADS and Kevin Smith from NSF International (Attachment 7). There are two components to the testing required in this protocol, one laboratory and the other field testing. The fourth draft of the protocol is near completion with Technology Panel approval anticipated. Nine vendors have been identified with three or four very interested,

but none have signed up to date. The test sites have been identified, and are being prepared for testing. Laboratory testing will be conducted at the Water Research Laboratory of Utah State. Field Testing will be conducted at Quebec Urban Community with BPR Groupe Consultants as the Field Testing Organization (FTO). The test plans are in preparation.

3. **High Rate Separation** presented by Donna Hackett, NSF International.(Attachment 8) There are two protocols in this technology area, Chemically Enhanced High Rate Separation (CEHRS) and Vortex Separation. CEHRS devices are a class of physical/chemical treatment technology that employs coagulants in a variety of reactor and clarifier configurations for solids removal from wet weather flow. Vortex separation devices use the inertial force of the vortex action to accomplish the same purpose. The Technology Panel have approved both protocols for submittal to the SAG after minor revisions. Four vendors have shown interest in signing up this summer. Collaboration with on-going testing is anticipated for the testing phase of this technology category.

Attachment 1

Attendance Record

Wet Weather Flow Technologies Pilot - Stakeholder Advisory Group Meeting
July 13, 2000- Ann Arbor, Michigan

Advisory Group Members Present

Dennis Dembiec - City of Birmingham
Stephen Tarallo - Infilco Degremont
Charles Rowney - Camp, Dresser, and McKee
Jim Daugherty - Kr üger (for P. Topalian)
Stephen McLaughlin - Maine DEP
Steve Hides - HIL Technology
John Stufflebean - Kansas City, Mo., Representing PTI
Kevin Willis - The Gorman Rupp Company
O. Karl Scheible - HydroQual, Inc.
Kenneth Eyre - APWA c/o Greeley and Hansen

Observers

Al Rae - private consultant
Ron McDaniel - Drain Works
John Jackson - Drain Works

Martin Reilly - Purizer
Horace Cochran - Purizer
Gary DeBerge - Purizer
Brandon Koltz -Triad Eng.
Dale Scherger - Scherger and Associates
Michael Colpetzec - CSR Stormceptor
Nate Baldwin - CSR Stormceptor
Sri Rangarajan - Limno-Tech, Inc.
Tim Dekker - Limno-Tech, Inc.
George Kurz - ADS Environmental
Lynn Riddle - Indiana Dept. of Environmental Management
Jay Knight - Knight Treatment Systems
Barry Johnson - Camp, Dresser, and McKee
Marc Stonehouse - Camp, Dresser, and McKee
David Woelkers - Hydro Compliance Management, Inc.
Bob Reimers - Tulane University
Richard Thomas - Aquionics
Anthony Igwe - Wade-Trim
Victor D'Amato - Arcadis Geraghty & Miller
Joe O'Brien - AquaShield
Eugene Glysson - University of Michigan
Richard Thomas - Aquionics

NSF Personnel

Mark Jost
Tom Bruuresma
John Schenk
Kevin Smith
Donna Hackett
Tom Stevens
Carol Becker
Penelope Hansen - USEPA
Mary Stinson - USEPA
Ray Frederick - USEPA
Stephanie Barrettt - ICF Consulting